

# Scientists reverse memory loss in mice

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University of Minnesota researchers Thursday announced they reversed memory loss for the first time in mice with significant brain degeneration.

The scientists said their success represents a breakthrough that offers hope to the estimated 4 million people who suffer from Alzheimer's disease.

The researchers first manipulated the genetic makeup of the mice so they developed dementia; the mice experienced progressive memory loss and also had brain atrophy similar to what a person with Alzheimer's disease experiences.

The mice were then further manipulated so the transgene that causes such symptoms could be "turned off." Transgenes are genes from one organism that have been incorporated into another organism.

The researchers predicted that when the transgene expressing the dementia was turned off, memory loss would stop. The results, however, surpassed their expectations, and the symptoms of dementia were reversed -- in other words, the mice regained memory.

"Most Alzheimer's disease treatments focus on slowing the symptoms or preventing the disease from progressing, but our research suggests in the future we may be able to reverse the effects of memory loss ..." said Karen Ashe, professor of neurology and lead author of the study.

The results appear in the journal Science.

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